

Appendix A

A clean copy of the amended claims

In the claims

- 5
1. (currently amended) A computer program product comprising a computer-readable medium having stored thereon instructions for causing a computer to perform a process for assessing business solutions comprising alternative network architectures and management processes for a telecommunications network, the computer program product comprising instructions for:
- 10
- (a) receiving data and options for plurality of network architectures, network management processes, and service and customer management processes;
- (b) engineering the plurality of network architectures based on the data and options of (a);
- 15
- (c) determining suppliers' equipment costs for said plurality of network architectures;
- (d) engineering the network management processes and the service and customer management processes, based on the data and options of (a), for managing said plurality of network architectures;
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- (e) determining suppliers' management processes costs for the network management processes and the service and customer management processes;
- (f) validating and calibrating the data and options and the costs for the plurality of network architectures, the network management processes, and the service and customer management processes;
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- (g) determining, based on the costs of the plurality of network architectures and the network management processes and the service and customer management processes, business parameters for the business solutions; and
- (h) storing and displaying the business parameters for the business solutions
- 30
- for the telecommunications network.

2. (currently amended) The computer program product as described in claim 1, wherein the instructions (a) comprise instructions for causing the computer to receive traffic data; customer data; and financial and labor data.
- 5 3. (currently amended) The computer program product as described in claim 2, wherein the instructions (a) further comprise instructions for causing the computer to:
- 10 - receive technology options which comprise at least one of: time division multiplexing (TDM), asynchronous transfer mode (ATM), frame relay (FR), Internet protocol (IP), virtual private network (VPN), multi protocol label switching (MPLS), and optical Ethernet including fiber, synchronous optical network (SONET), resilience packet ring (RPR), and dense wavelength division multiplexing (DWDM) for a network architecture for a business solution;
 - 15 - receive options for the network management processes which comprise at least one of: inside plant maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs for managing the network architecture for the business solution; and
 - 20 - receive options for the service and customer management processes which comprise at least one of: customer relationship management (CRM), work order management (WOM), network inventory management (NIM), service activation and provisioning (SAP), fault management (FM), performance management (PM), accounting and billing, and security management for managing the network architecture for the business solution.
- 25 4. (currently amended) The computer program product as described in claim 1, wherein the instructions (g) comprise instructions for causing the computer to:
- 30 - compute the business parameters for the business solutions over a pre-determined study period; and
 - determine business parameters which comprise at least one of: capital expenditure (CAPEX), wherein the CAPEX comprises a network architecture cost, taxes, interests, and depreciation and amortization (D/A)

- 5 expenses; operational expenditure (OPEX), wherein the OPEX comprises a management processes cost, a leasing cost, and sales, general and administration (SG&A); revenue; capacity; return on investment (ROI); earnings before interest, taxes, and depreciation and amortization (EBITDA); earnings before interest and taxes (EBIT); the OPEX as percentage of the revenue; and total expenditure as percentage of the revenue, wherein the total expenditure comprises the CAPEX and the OPEX.
- 10 5. (currently amended) The computer program product as described in claim 3, wherein the instructions (b) comprise instructions for causing the computer to engineer the network architecture for the business solution.
- 15 6. (currently amended) The computer program product as described in claim 3, wherein the instructions (d) comprise instructions for causing the computer to engineer the network management processes and the service and customer management processes for managing the network architecture for the business solution.
- 20 7. (currently amended) The computer program product as described in claim 4, wherein the instructions (h) comprise instructions for causing the computer to display the business parameters in tables and graphical charts for the business solutions over the pre-determined study period.
- 25 8. (currently amended) The computer program product as described in claim 5, wherein the instructions (c) comprise instructions for causing the computer to determine a network architecture cost and a leasing cost for the network architecture for the business solution.
- 30 9. (currently amended) The computer program product as described in claim 8, wherein the instructions (f) comprise instructions for causing the computer to

validate and calibrate the data and options; the network architecture cost; and the leasing cost for said network architecture for the business solution.

10. (currently amended) The computer program product as described in claim 8,
5 wherein the instructions (b) further comprise instructions for causing the computer to determine an owned network elements (NEs) count; a leased NEs count; an owned customer premise equipment (CPE) count; a leased CPE count; an owned links count; a leased links count; and a leased ports count for said network architecture; and wherein said network architecture has NEs, CPE, and
10 links from the same or different equipment suppliers.
11. (currently amended) The computer program product as described in claim 10, wherein the instructions (c) further comprise instructions for causing the computer to determine a price per network element (NE), a footprint per NE
15 cost, a power consumption per NE cost; a price per CPE, a footprint per CPE cost, and a power consumption per CPE cost; and a price per link and a link transmission rate.
12. (currently amended) The computer program product as described in claim 20 11, wherein the instructions for determining the network architecture cost comprise instructions for causing the computer to compute a total owned NEs cost; a total owned CPE cost; and a total owned links cost for said network architecture for the business solution; and wherein the instructions for determining the leasing cost comprise instructions for causing the computer to
25 compute a total footprints cost and a total power consumptions cost for said owned NEs and CPE.
13. (currently amended) The computer program product as described in claim 30 10, wherein the instructions (c) further comprise instructions for causing the computer to determine a leased per NE cost, a footprint per NE cost, and a power consumption per NE cost; a leased per CPE cost, a footprint per CPE cost, and a power consumption per CPE cost; a leased per link cost; a leased link

per unit length cost, a unit length per link count, and a link transmission rate;
and a leased per port cost.

14. (currently amended) The computer program product as described in claim
13, wherein the instructions for determining the leasing cost comprise
instructions for causing the computer to compute a total leased NEs cost; a total
leased CPE cost; a total footprints cost and a total power consumptions cost for
said leased NEs and CPE; a total leased links cost; a total leased links per unit
length cost; and a total leased ports cost for said network architecture for the
business solution.
15. (currently amended) The computer program product as described in claim 6,
wherein the instructions (e) comprise instructions for causing the computer to:
- determine a network management processes cost, wherein the network
management processes cost comprises costs for inside plant maintenance,
outside plant maintenance, network engineering, network provisioning,
installation, testing, and repairs for each network element in the network
architecture for the business solution;
 - determine a service and customer management processes cost, wherein the
service and customer management processes cost comprises costs for
customer relationship management (CRM), work order management
(WOM), network inventory management (NIM), service activation and
provisioning (SAP), fault management (FM), performance management
(PM), accounting and billing, and security management for each link in
the network architecture for the business solution; and
 - determine a management processes cost which comprises the network
management processes cost and the service and customer management
processes cost.
16. (currently amended) The computer program product as described in claim
15, wherein the instructions for engineering the network management processes
comprise instructions for causing the computer to engineer at least one of the

following processes: inside plant maintenance; outside plant maintenance;
network engineering; network provisioning; installation; testing; and repairs.

17. (currently amended) The computer program product as described in claim
5 16, further comprises instructions for causing the computer to determine the
network management processes cost for said network management processes for
at least one of: a manual operations mode; a mechanized operations mode; and a
manual and mechanized operations mode.
18. (currently amended) The computer program product as described in claim
10 15, wherein the instructions for engineering the service and customer
management processes comprise instructions for causing the computer to
engineer at least one of the following processes: customer relationship
management (CRM); work order management (WOM); network inventory
15 management (NIM); service activation and provisioning (SAP); fault
management (FM); performance management (PM); accounting and billing; and
security management.
19. (currently amended) The computer program product as described in claim
20 18, further comprises instructions for causing the computer to determine costs of
the customer relationship management (CRM); the work order management
(WOM); the network inventory management (NIM); the service activation and
provisioning (SAP); the fault management (FM); the performance management
(PM); the accounting and billing; and the security management for at least one
25 of: a manual operations mode; a mechanized operations mode; and a manual and
mechanized operations mode.
20. (canceled)
21. (currently amended) The computer program product as described in claim
30 19, wherein the instructions for determining the cost of the customer
relationship management (CRM) comprise instructions for causing the computer

to determine costs for at least one of: a work order entry and validation process; a service delivery and work order processing process; a customer care process; a trouble ticketing process; and a service assurance and performance reporting process.

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22. (currently amended) The computer program product as described in claim 19, wherein the instructions for determining the cost of the work order management (WOM) comprise instructions for causing the computer to determine costs for at least one of: a work order processing process; a client management process; a report management process; and an administration management process.

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23. (currently amended) The computer program product as described in claim 19, wherein the instructions for determining the cost of the network inventory management (NIM) comprise instructions for causing the computer to determine costs for at least one of: a customer, services, and resources association management process; an equipment management process; and a network management process.

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24. (currently amended) The computer program product as described in claim 19, wherein the instructions for determining the cost of the service activation and provisioning (SAP) comprise instructions for causing the computer to determine costs for at least one of: a create a new service process; a customer association process; a process for aligning and synchronizing with billing, maintenance, and performance; and a resource discovery and database queries process.

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25. (currently amended) The computer program product as described in claim 19, wherein the instructions for determining the cost of the fault management (FM) comprise instructions for causing the computer to determine costs for at least one of: a trouble ticketing process; an isolate problem process; and an analysis and resolution for service logic agreement (SLA) process.

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26. (currently amended) The computer program product as described in claim 19, wherein the instructions for determining the cost of the performance management (PM) comprise instructions for causing the computer to determine costs for at least one of: a collect performance data process; a generate performance reports process; and a validate service logic agreement (SLA) process.
27. (canceled)
28. (canceled)
29. (canceled)
30. (canceled)
31. (currently amended) A method for assessing business solutions comprising alternative network architectures and management processes for a telecommunications network, the method comprising the steps of instructing a computer to:
- (n) receive data and options for plurality of network architectures, network management processes, and service and customer management processes;
 - (m) engineer the plurality of network architectures based on the data and options of (n);
 - (u) determine suppliers' equipment costs for said plurality of network architectures;
 - (v) engineer the network management processes and the service and customer management processes, based on the data and options of (n), for managing said plurality of network architectures;
 - (w) determine suppliers' management processes costs for the network management processes and the service and customer management processes;

- (x) determine, based on the costs of the plurality of network architectures and the network management processes and the service and customer management processes, business parameters for the business solutions;
- 5 (y) validate and calibrate the data and options and the costs for the plurality of network architectures and the network management processes and the service and customer management processes; and
- (z) store and display the business parameters for the business solutions for the telecommunications network.
- 10 32. (currently amended) The method as described in claim 31, wherein the step (x) comprises steps of instructing the computer to:
- compute the business parameters for the business solutions over a pre-determined study period; and
 - 15 - determine at least one of the business parameters which comprise: capital expenditure (CAPEX), wherein the CAPEX comprises a network architecture cost, taxes, interests, and depreciation and amortization (D/A) expenses; operational expenditure (OPEX), wherein the OPEX comprises a management processes cost, a leasing cost, and sales, general and administration (SG&A); revenue; capacity; return on investment (ROI);
 - 20 earnings before interest, taxes, and depreciation and amortization (EBITDA); earnings before interest and taxes (EBIT); the OPEX as percentage of the revenue; and total expenditure as percentage of the revenue, wherein the total expenditure comprises the CAPEX and the OPEX.
- 25 33. (currently amended) The method as described in claim 31, wherein the step (n) comprises steps of instructing the computer to:
- receive traffic data, customer data, and labor and financial data;
 - 30 - receive technology options which comprise at least one of: time division multiplexing (TDM), asynchronous transfer mode (ATM), frame relay (FR), Internet protocol (IP), virtual private network (VPN), multi protocol label switching (MPLS), and optical Ethernet including fiber, synchronous optical

- network (SONET), resilience packet ring (RPR), and dense wavelength division multiplexing (DWDM) for a network architecture for a business solution;
- 5 - receive options for the network management processes which comprise at least one of: inside plant maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs for managing the network architecture for the business solution; and
- 10 - receive options for the service and customer management processes which comprise at least one of: customer relationship management (CRM), work order management (WOM), network inventory management (NIM), service activation and provisioning (SAP), fault management (FM), performance management (PM), accounting and billing, and security management for managing the network architecture for the business solution.
- 15 34. (currently amended) The method as described in claim 33, wherein the step (u) comprises steps of instructing the computer to determine a network architecture cost and a leasing cost for the network architecture for the business solution.
- 20 35. (currently amended) The method as described in claim 34, wherein the step (m) comprises steps of instructing the computer to engineer the network architecture for the business solution.
- 25 36. (currently amended) The method as described in claim 33, wherein the step (v) comprises steps of instructing the computer to:
- 30 - engineer network management processes which comprise engineering at least one of the following processes: inside plant maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs; and
- engineer the service and customer management processes which comprise engineering at least one of the following processes: customer relationship management (CRM), work order management (WOM), network inventory

management (NIM), service activation and provisioning (SAP), fault management (FM), performance management (PM), accounting and billing, and security management.

- 5 37. (currently amended) The method as described in claim 36, wherein the step
(w) comprises steps of instructing the computer to:
- determine a network management processes cost for the network
management processes, which comprises determining costs of inside plant
maintenance, outside plant maintenance, network engineering, network
10 provisioning, installation, testing, and repairs for each network element in
the network architecture for the business solution for at least one of: a
manual operations mode, a mechanized operations mode, and a manual and
mechanized operations mode;
 - determine a service and customer management processes cost for the service
15 and customer management processes, which comprises determining costs of
customer relationship management (CRM), work order management
(WOM), network inventory management (NIM), service activation and
provisioning (SAP), fault management (FM), performance management
(PM), accounting and billing, and security management for each link in the
20 network architecture for the business solution for at least one of: a manual
operations mode, a mechanized operations mode, and a manual and
mechanized operations mode; and
 - determine a management processes cost which comprises the network
management processes cost and the service and customer management
25 processes cost.
38. (currently amended) The method as described in claim 32, wherein the step
(z) comprises steps of instructing the computer to tabulate and graphically chart
the business parameters for said business solutions over said pre-determined
30 study period.
39. (canceled).